Specialised Air Motors and Transmission
Factory 19 / 5 Lyn Parade PRESTONS NSW 2170
PH: 02 9607 4100 FAX: 02 9607 4200

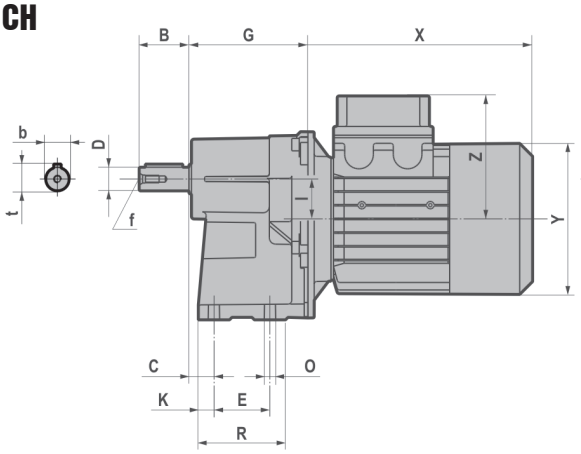
HELICAL GEARED MOTORS

sales@samt.com.au

Specialised Air Motors and Transmission
www.tonson-motor.com.au

HA/CHA..1 - Dimensions

CH



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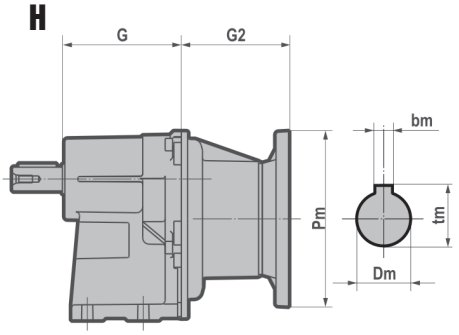
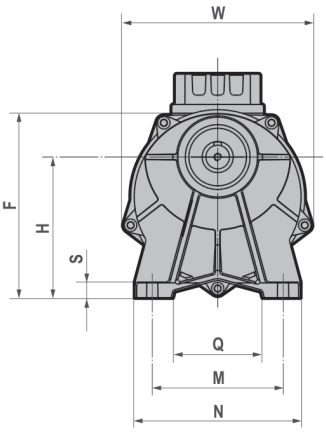
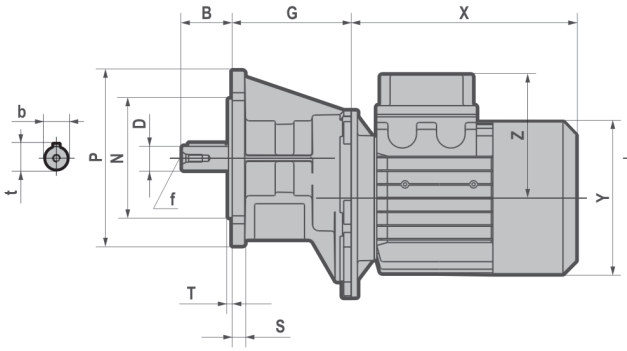
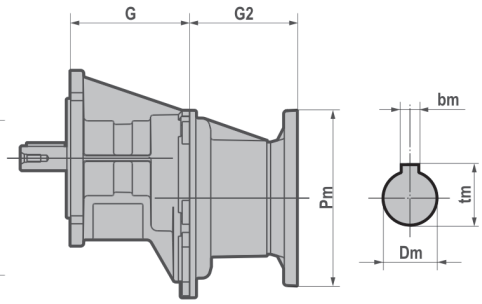


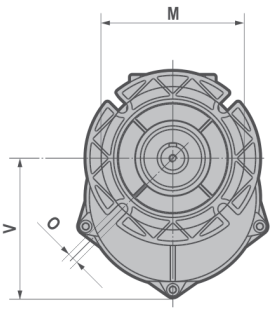


CH..F



H...F





H... - CH...

	D	B	b	t	f	C	E	F	G	H	I	K	M	N	O	Q	R	S	W
A41	16 j6	40	5	18	M6	20	45	151	95.5	113	32	12.5	105	130	9	75	70	12	152
	19 j6		6	21.5															
A51	24 j6	50	8	27	M8	6	70	169	104	130	32	15	150	180	11	115	100	12	152
A61	28 j6	60	8	31	M8	7.5	70	219.5	129	165	47.5	20	165	200	11	120	110	15	218

H...F - CH...F

	M	N	O	P	S	T	V
A41F	115	95 f8	9	140	10	3	111.5
A51F	130	110 f8	9	160	10	3.5	111.5
A61F	165	130 f8	11	200	15	3.5	161.5

H... - H...F

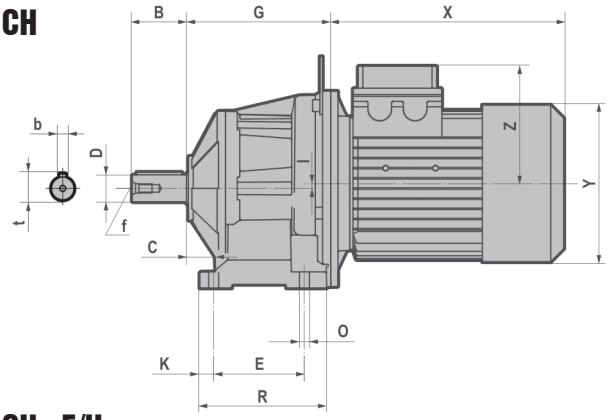
	G2	
	A41-A51	A61
063	55	/
071	55	/
080	86	87.5
090	86	87.5
100-112	/	87.5

~ kg			
	A41	A51	A61
063	3,1	4,2	/
071	3,2	4,3	/
080-090	3,5	4,5	6,6
100-112	/	/	7,0

- For the dimensions concerning the motor connection area (Pm, Dm, bm, tm, X, Y, Z) please refer to **CHA..1/2/3 - Dimensions** **PAM B5 - Dimensions**
- Kg w/o oil

HA/CHA..2 - Dimensions

CH



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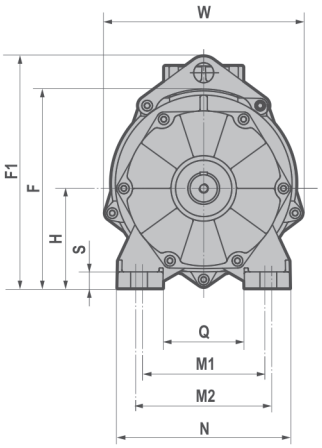
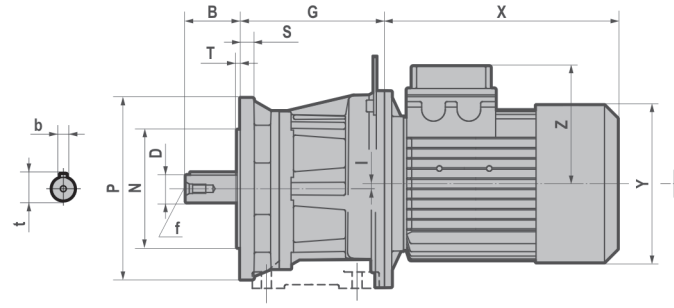
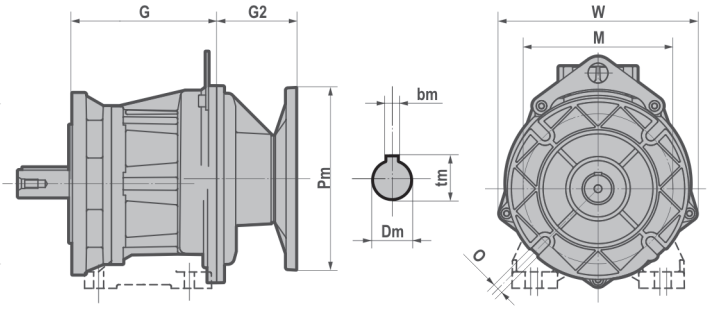


CH...F/U



H...F/U



H... - CH...

	D	B	b	t	f	C	E	F	F1	G	H	I	K	M1	M2	N	O	Q	R	S	W
A32	20 j6	40	6	22.5	M6	18	80	155	/	117.5	75	10	13	110	120	145	9	75	111	15	152
	(19 j6)	40	6	21.5	M6																
	(16 j6)	40	5	18	M6																
	(14 j6)	30	5	16	M6																
A42	25 j6	50	8	28	M10	25	85	160	/	124.5	80	10	13	110	120	145	9	75	111	15	152
	(24 j6)	50	8	27	M8																
	(19 j6)	40	6	21.5	M6																
A52	30 j6	60	8	33	M10	30	100	217.5	255.5	159	110	5.5	15.5	135	150	190	11	90	140	18	218
	(35 j6)	70	10	38	M12																
	(24 j6)	50	8	27	M8																
A62	40 j6	80	12	43	M16	35	110	237.5	275.5	168	120	15.5	20	170	185	230	14	120	150	20	218
	(30 j6)	60	8	33	M10																
	(28 j6)	60	8	31	M10																

H...F/U - CH...F/U

	P	M	N f8	O	G	I	S	T	W
A32F	140	115	95	9	117.5	10	10	3	152
	(120)	100	80	9					
A42F	160	130	110	9	124.5	10	10	3.5	152
	(140)	115	95	9					
A52F	200	165	130	11	159	5.5	15	3.5	218
	(160)	130	110	11					
A62F	250	215	180	14	168	15.5	15	4	218
	(200)	165	130	14					

	G2	
	A32-A42	A52-A62
063	55	/
071	55	/
080	86	87.5
090	86	87.5
100-112	/	87.5

~ kg				
	A32	A42	A52	A62
063	4,2	5,2	/	/
071	4,3	5,3	/	/
080-090	4,6	5,5	9,5	11,3
100-112	/	/	13,0	14,8

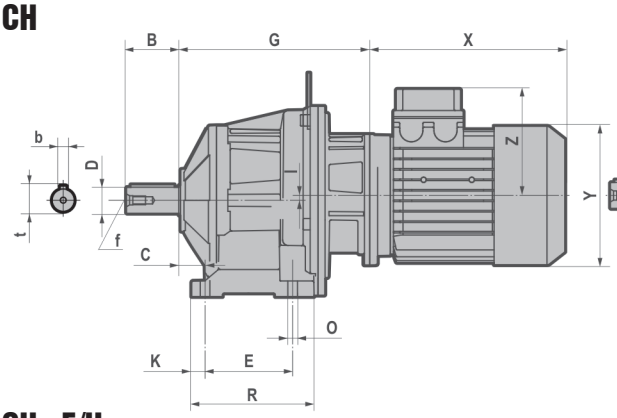
Kg w/o oil

- For the dimensions concerning the motor connection area (Pm, Dm, bm, tm, X, Y, Z) please refer to **CHA..1/2/3 - Dimensions**
  PAM B5 - Dimensions

(..) Only on request

HA/CHA..3 - Dimensions

CH



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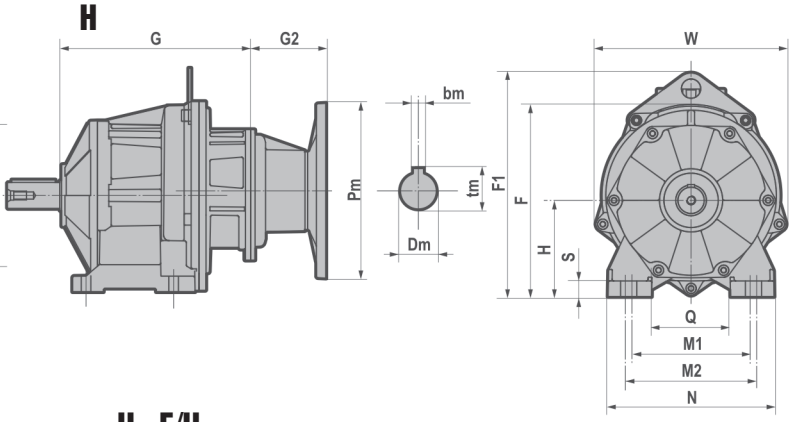
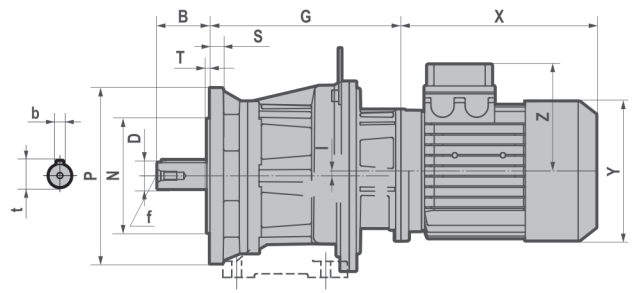
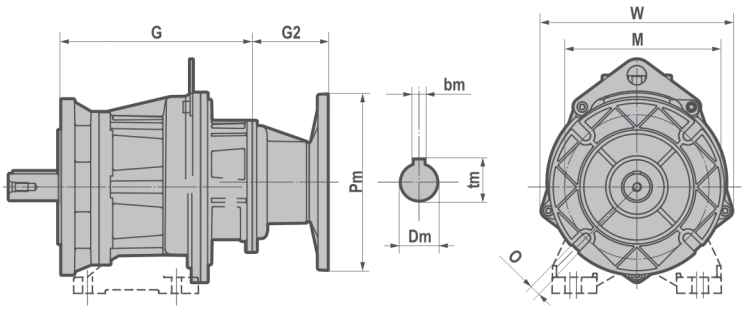


CH...F/U



H...F/U



H... - CH...

	D	B	b	t	f	C	E	F	F1	G	H	I	K	M1	M2	N	O	Q	R	S	W
A33	20 j6	40	6	22.5	M6	18	80	155	/	170.5	75	10	13	110	120	145	9	75	111	15	152
	(19 j6)	40	6	21.5	M6																
	(16 j6)	40	5	18	M6																
	(14 j6)	30	5	16	M6																
A43	25 j6	50	8	28	M10	25	85	160	/	177.5	80	10	13	110	120	145	9	75	111	15	152
	(24 j6)	50	8	27	M8																
	(19 j6)	40	6	21.5	M6																
A53	30 j6	60	8	33	M10	30	100	217.5	255.5	218	110	5.5	15.5	135	150	190	11	90	140	18	218
	(35 j6)	70	10	38	M12																
	(24 j6)	50	8	27	M8																
A63	40 j6	80	12	43	M16	35	110	237.5	275.5	227	120	15.5	20	170	185	230	14	120	150	20	218
	(30 j6)	60	8	33	M10																
	(28 j6)	60	8	31	M10																

H...F/U - CH...F/U

	P	M	N f8	O	G	I	S	T	W
A33F	140	115	95	9	170.5	10	10	3	152
	(120)	100	80	9					
A43F	160	130	110	9	177.5	10	10	3.5	152
	(140)	115	95	9					
A53F	200	165	130	11	218	5.5	15	3.5	218
	(160)	130	110	11					
A63F	250	215	180	14	227	15.5	15	4	218
	(200)	165	130	14					

	G2
063	55
071	55
080	86
090	86

~ kg				
	A33	A43	A53	A63
063	4,0	5,8	9,9	12,5
071	4,1	5,9	10,0	12,6
080-090	5,2	6,1	10,2	13,2

Kg w/o oil

- For the dimensions concerning the motor connection area (Pm, Dm, bm, tm, X, Y, Z) please refer to **CHA..1/2/3 - Dimensions** **PAM B5 - Dimensions**

(..) Only on request

CHA..1/2/3 - Dimensions

CHA... - CHA...F

T - Motor

CH	T	063	071	080	090S	090L	100	112
A41-A51 A32-A42 A33-A43-A53-A63	X	180	205	223	232	257	/	/
	Y	121	139	158	173	173	/	/
	Z	104	112	122	130	130	/	/
A52-A61-A62	X	/	/	218	232	257	290	302
	Y	/	/	158	173	173	191	211
	Z	/	/	122	130	130	139	154

TB -Brake motor

CH	TB	063	071	080	090S	090L	100	112
A41-A51 A32-A42 A33-A43-A53-A63	X	238	271	294	309	334	/	/
	Y	121	139	158	173	173	/	/
	Z	104	112	122	130	130	/	/
A52-A61-A62	X	/	/	290	309	334	372	400
	Y	/	/	158	173	173	191	211
	Z	/	/	122	130	130	139	154

Weight (kg)

T - Motor

CH	063	071	080	090S	090L	100	112
A32	6,9	8,7	12,7	/	/	/	/
A33	7,6	9,5	13,5	/	/	/	/
A41	5,9	7,8	11,8	/	/	/	/
A42	7,8	9,7	13,7	15,6	18,1	/	/
A43	8,4	10,3	14,3	16,2	18,7	/	/
A51	6,2	8,1	12,1	14,0	16,5	/	/
A52	/	/	17,2	19,1	21,6	26,2	36,5
A53	12,0	13,9	17,9	19,8	22,3	/	/
A61	/	/	14,3	16,2	18,7	23,3	33,6
A62	/	/	19,2	21,1	23,6	28,2	38,5
A63	14,6	16,5	20,5	22,4	24,9	/	/

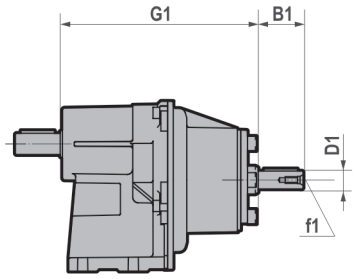
TB -Brake motor

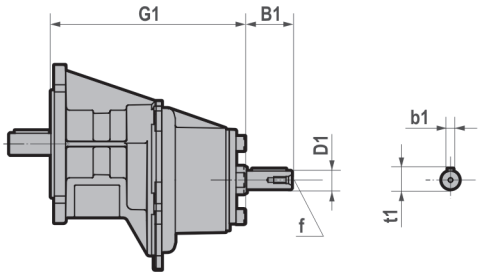
CH	063	071	080	090S	090L	100	112
A32	8,2	10,6	15,8	/	/	/	/
A33	8,9	11,4	16,6	/	/	/	/
A41	7,2	9,7	14,9	/	/	/	/
A42	9,1	11,6	16,8	20,5	23,0	/	/
A43	9,7	12,2	17,4	21,1	23,6	/	/
A51	7,5	10,0	15,2	18,9	21,4	/	/
A52	/	/	20,3	24,3	26,5	31,1	44,8
A53	13,3	15,8	21,0	24,7	27,2	/	/
A61	/	/	17,4	21,1	23,6	28,2	41,9
A62	/	/	22,3	26,0	28,5	33,1	46,8
A63	15,9	18,4	23,6	27,3	29,8	/	/

- Kg w/o oil

IHA..1/2/3 - Dimensions

A41 - A51 - A61

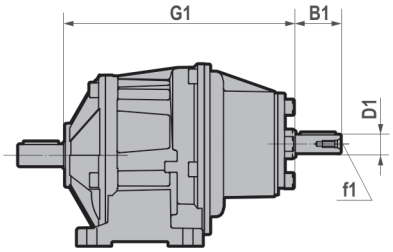


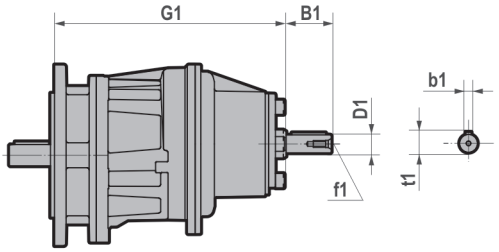


IH... **IH...F**

	G1	D1	B1	b1	f1	t1	~kg
A41	176	16 j6	40	5	M6	18	3,3
A51	184,5	16 j6	40	5	M6	18	4,2
A61	209	19 j6	40	6	M6	21,5	6,5

A32 - A42 - A52 - A62

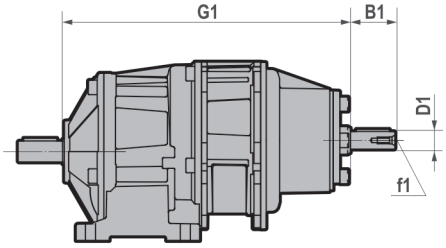


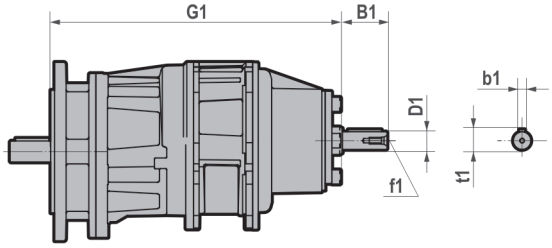


IH... **IH...F**

	G1	D1	B1	b1	f1	t1	~kg
A32	198	16 j6	40	5	M6	18	4,3
A42	205	16 j6	40	5	M6	18	5,2
A52	239	19 j6	40	6	M6	21,5	9,4
A62	248	19 j6	40	6	M6	21,5	11,2

A33 - A43 - A53 - A63





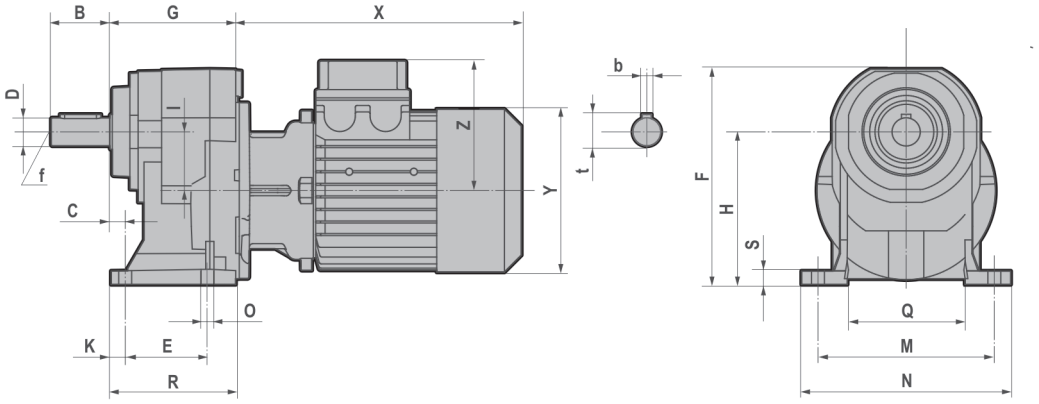
IH... **IH...F**

	G1	D1	B1	b1	f1	t1	~kg
A33	251	16 j6	40	5	M6	18	5,0
A43	258	16 j6	40	5	M6	18	5,8
A53	299	16 j6	40	5	M6	18	9,9
A63	308	16 j6	40	5	M6	18	12,9

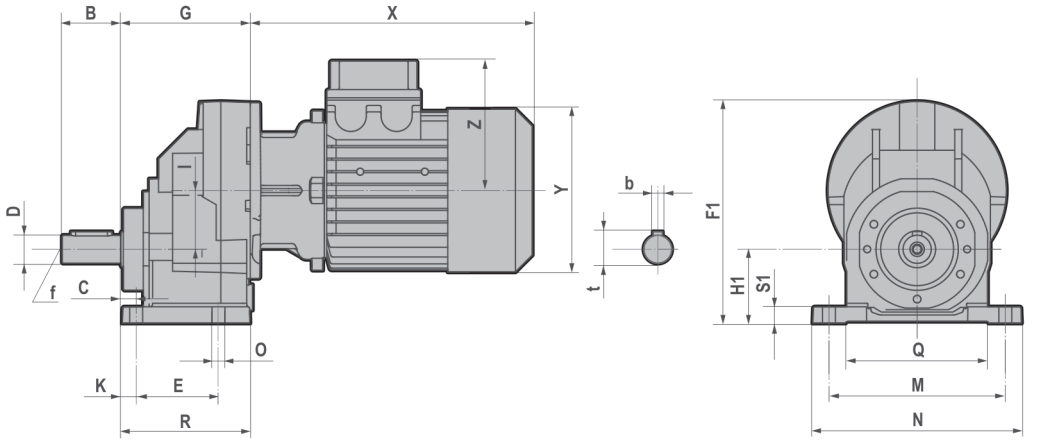
Kg w/o oil

H/CH..1 - Dimensions

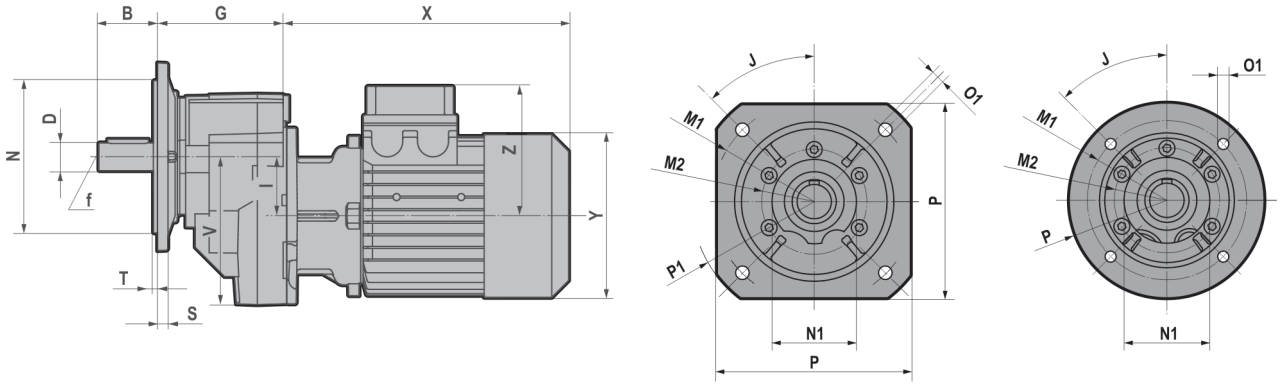
CH...



CH...M



CH...F



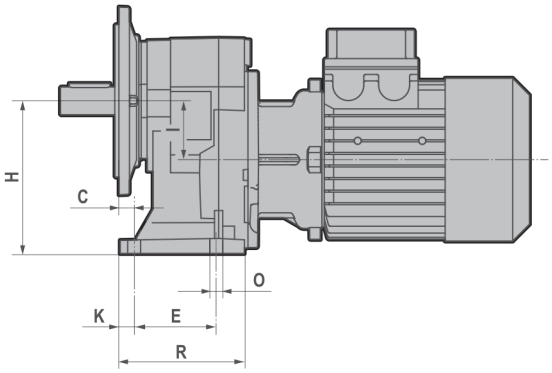
FA

FB

FC

FD

CH...U



H/CH..1 - Dimensions

H... - CH...

	B	C	D	E	F	F1	G	H	H1	I	K	M	
041	40	13	19 j6	45	168.5	168	100	120	50	42	12	105	
051	50	13	24 j6	70	183.5	189	110	130	63	50	12	150	
061	60	16	28 j6	70	231	216	125	165	80	60	14	165	
081	80	25	38 k6	85	277	284	135	195	100	80	23	185	
101	110	19	48 k6	130	355	377	180	252	125	100	17	240	
121	110	25	55 m6	150	422	426.5	210	300	160	115	22	280	

	N	N1	O	Q	Q1	R	R1	S	S1	V~	b	t	f
041	130	125	9	74	55	86.5	98	9.5	8	118	6	21.5	M6
051	178	178	11	100	121.5	106	109	11.5	14	126	8	27	M8
061	195	195	11	110	135.5	120	123	15	16	136	8	31	M10
081	230	232	14	123	151	130	135	15	20	184	10	41	M12
101	295	295	18	162	185.5	173	178	16	22	251.5	14	51.5	M16
121	340	340	18	183	224	202	207	19	25	266.5	16	59	M20

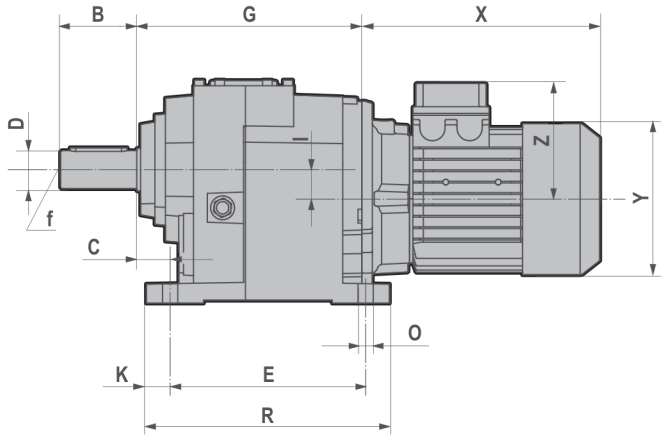
H...F/U - CH...F/U

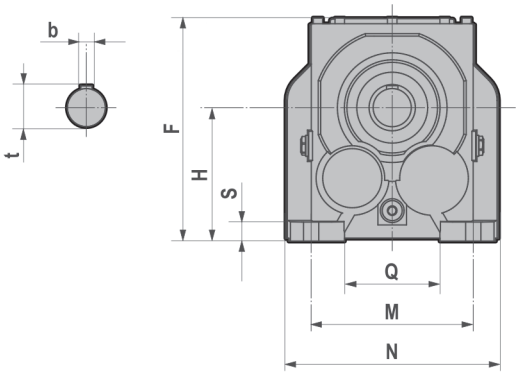
		J	M1	M2	N	N1	O1	P	P1	S	T
041 051	FA	45	ø 165	ø 85	130 f8	70	11	ø 160	ø 200	9	3,5
	FB	45	ø 130	ø 85	110 f8	70	9	ø 160	/	9	3,5
	FC	45	ø 115	ø 85	95 f8	70	9	ø 140	/	9	3
	FD	45	ø 100	ø 85	80 f8	70	M8	ø 120	/	9	3
061	FA	45	ø 215	ø 105	180 f8	90	14	ø 200	ø 250	12	4
	FB	45	ø 165	ø 105	130 f8	90	11	ø 200	/	12	3,5
	FC	/	/	/	/	/	/	/	/	/	/
081 101	FA	45	ø 265	ø 130	230 f8	110	14	ø 250	ø 300	15	4
	FB	45	ø 215	ø 130	180 f8	110	14	ø 250	/	15	4
	FC	45	ø 165	ø 130	130 f8	110	11	ø 200	/	15	3,5
121	FA	45	ø 300	ø 165	250 f8	130	18	ø 300	ø 350	16	5
	FB	45	ø 265	ø 165	230 f8	130	14	ø 300	/	16	4
	FC	45	ø 215	ø 165	180 f8	130	14	ø 250	/	16	4

- For the dimensions concerning the motor connection area (X, Y, Z) please refer to. **CH..1/2/3 - Dimensions**

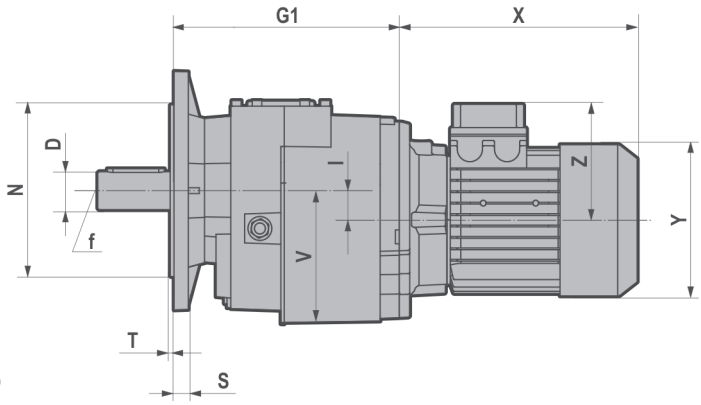
H/CH..2/3 - Dimensions

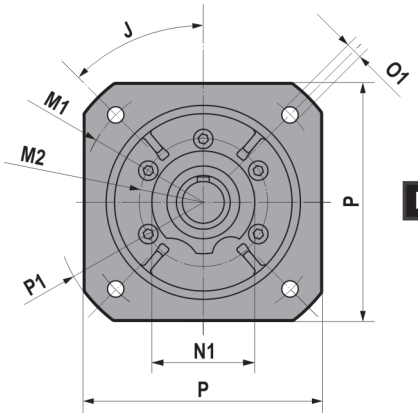
CH...



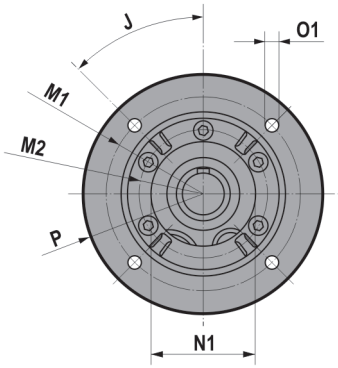


CH...F





FA

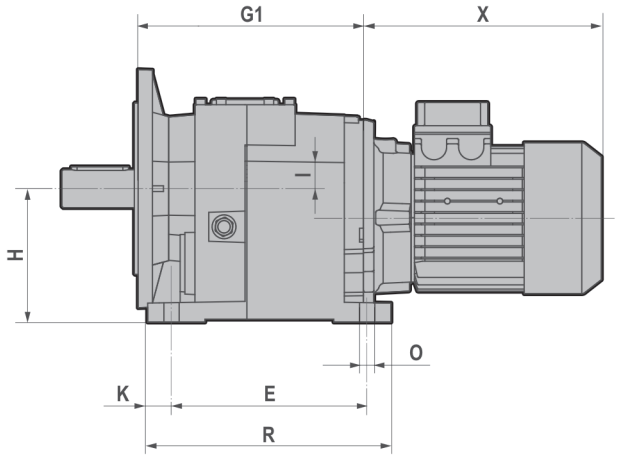


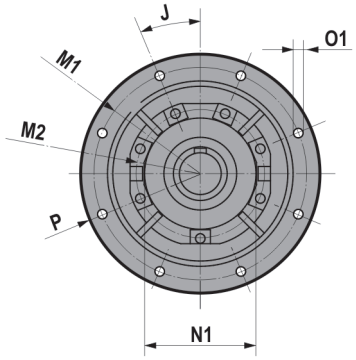
FB

FC

FD

CH...U





FB (H140)

H/CH..2/3 - Dimensions

H... - CH...

	B	C	D	E	F	G	G1	H	I	K
030	50	25	25 j6	130	169	141	150	90	9.2	15
040	60	30	30 j6	165	189	152	152	115	18	15
050	70	30	35 k6	165	192	187	187	115	25.5	18
060	80	35	40 k6	205	234	236	236	140	31	25
080	100	40	50 k6	260	292	272.5	272.5	180	31	27.5
100	120	40	60 m6	310	364	316	316	225	35.5	27.5
125	140	45	70 m6	370	399	376.5	376.5	250	47.5	35
140	170	50	90 m6	410	490	430	430	315	45	40

	M	N	O	Q	R	S	V~	b	t	f
030	110	140	11	60	160	15	92	8	28	M10
040	135	170	14	85	195	15	115	8	33	M10
050	135	185	14	80	201	18	116	10	38	M12
060	170	220	16	100	255	20	140	12	43	M16
080	215	280	18	140	315	25	180	14	53.5	M16
100	250	330	22	159	365	30	227	18	64	M20
125	290	406	26	185.5	440	35	253	20	74.5	M20
140	340	450	26	230	490	35	320	25	95	M20

H...F/U - CH...F/U

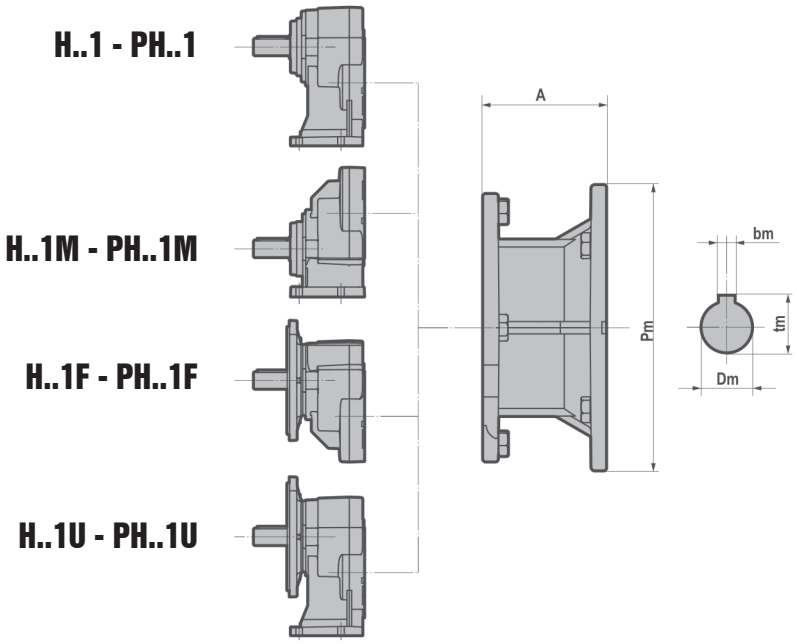
		J	M1	M2	N	N1	O1	P	P1	S	T
030 040	FA	45	ø 165	ø 85	130 f8	70	11	160	ø 200	9	3,5
	FB	45	ø 130	ø 85	110 f8	70	9	ø 160	/	9	3,5
	FC	45	ø 115	ø 85	95 f8	70	9	ø 140	/	9	3
	FD	45	ø 100	ø 85	80 f8	70	M8	ø 120	/	9	3
050	FA	45	ø 215	ø 105	180 f8	90	14	200	ø 250	12	4
	FB	45	ø 165	ø 105	130 f8	90	11	ø 200	/	12	3,5
	FC	/	/	/	/	/	/	/	/	/	/
060	FA	45	ø 265	ø 130	230 f8	110	14	250	ø 300	15	4
	FB	45	ø 215	ø 130	180 f8	110	14	ø 250	/	15	4
	FC	45	ø 165	ø 130	130 f8	110	11	ø 200	/	15	3,5
080	FA	45	ø 300	ø 165	250 f8	130	18	300	ø 350	16	5
	FB	45	ø 265	ø 165	230 f8	130	14	ø 300	/	16	4
	FC	45	ø 215	ø 165	180 f8	130	14	ø 250	/	16	4
100	FA	/	/	/	/	/	/	/	/	/	/
	FB	45	ø 300	ø 185	250 f8	150	18	ø 350	/	18	5
	FC	45	ø 265	ø 185	230 f8	150	14	ø 300	/	18	4
125	FA	/	/	/	/	/	/	/	/	/	/
	FB	45	ø 350	ø 200	300 f8	170	18	ø 400	/	18	5
	FC	/	/	/	/	/	/	/	/	/	/
140	FA	/	/	/	/	/	/	/	/	/	/
	FB	22,5	ø 400	ø 245	350 f8	210	18	ø 450	/	25	5
	FC	45	ø 350	ø 245	300 f8	210	18	ø 400	/	25	5

- For the dimensions concerning the motor connection area (X, Y, Z) please refer to **CH..1/2/3 - Dimensions**

H/PH..1/2/3 - Dimensions

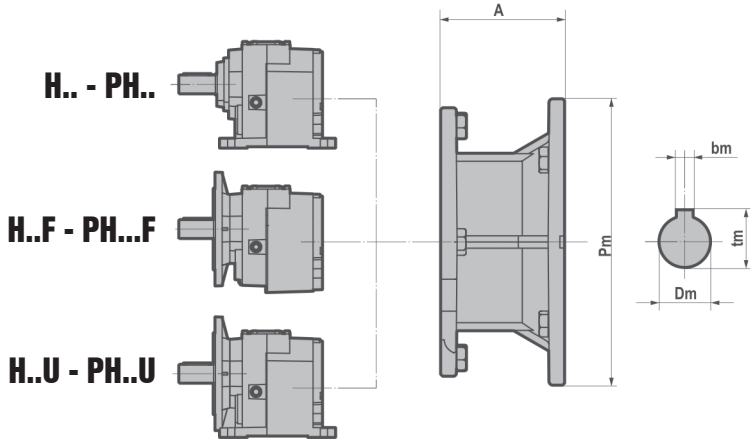
H/PH..1

H PH	A		
	041 051 061	081	101 121
071	69	/	/
080-090	90	70	/
100-112	105	85	75,5
132	/	110	100,5
160-180	/	/	148
200	/	/	185



H/PH..2/3

H PH	A			
	030 040 050	060 080	100 125	140
063	57	/	/	/
071	69	49	/	/
080-090	90	70	60,5	/
100-112	105	85	75,5	/
132	/	110	100,5	76
160-180	/	157,5	148	123,5
200	/	/	185	160,5
225	/	/	/	160,5



Weight (kg)

H PH	030	040	041	050	051	060	061	080	081	100	101	121	125	140
063	8,4	10,9	/	16,0	/	/	/	/	/	/	/	/	/	/
071	8,8	11,3	4,8	16,4	6,7	27,0	/	/	/	/	/	/	/	/
080-090	9,4	11,9	5,4	17,0	7,3	29,1	9,3	49,1	19,3	77,6	/	/	/	/
100-112	13,7	16,2	/	21,3	11,6	31,2	13,6	51,2	21,3	79,9	32,7	/	109,5	/
132	/	/	/	/	/	33,9	/	53,2	23,9	82,7	35,5	36,8	112,3	177,0
160-180	/	/	/	/	/	/	/	60,5	/	88,7	41,5	42,8	118,3	184,9
200	/	/	/	/	/	/	/	/	/	/	/	57,8	133,3	199,1
225	/	/	/	/	/	/	/	/	/	/	/	/	/	200,9

Weight without motor
Kg w/o oil

- For the dimensions concerning the motor connection area (Pm, Dm, bm, tm) please refer to **PAM B5 - Dimensions**

CH..1/2/3 - Dimensions

CH... - CH...F

T - Motor

CH	T	063	071	080	090S	090L	100	112	132S	132M
030-040-041 050-051-061	X	215	241	268	296	321	333	351	/	/
	Y	121	139	158	173	173	191	211	/	/
	Z	104	112	122	130	130	139	154	/	/
060-080-081	X	/	221	248	276	301	335	356	396	443
	Y	/	139	158	173	173	191	211	249	249
	Z	/	112	122	130	130	139	154	194	194
100-101 121-125	X	/	/	/	267	292	326	347	386	434
	Y	/	/	/	173	173	191	211	249	249
	Z	/	/	/	130	130	139	154	194	194

TB - Brake motor

CH	TB	063	071	080	090S	090L	100	112	132S	132M
030-040-041 050-051-061	X	273	306.5	341	373	398	415	448	/	/
	Y	121	139	158	173	173	191	211	/	/
	Z	104	112	122	130	130	139	154	/	/
060-080-081	X	/	286.5	321	353	378	417	453	495	547
	Y	/	139	158	173	173	191	211	249	249
	Z	/	112	122	130	130	139	154	194	194
100-101 121-125	X	/	/	/	343	368	407	443	485	537
	Y	/	/	/	173	173	191	211	249	249
	Z	/	/	/	130	130	139	154	194	194

Weight (kg)

T - Motor

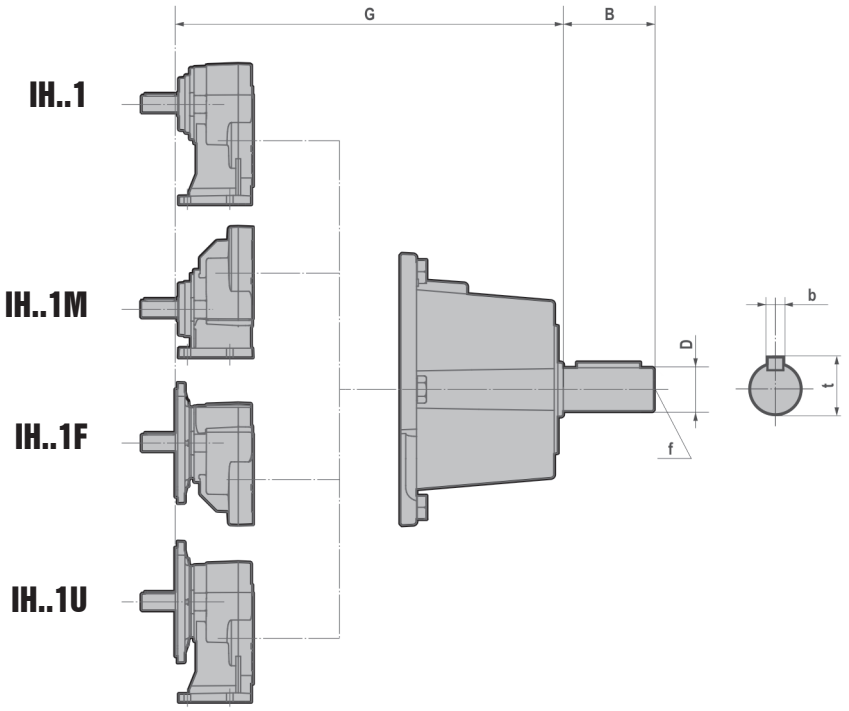
CH	063	071	080	090S	090L	100	112	132S	132M
030	11,9	12,8	17,5	21,4	23,4	28,9	40,4	/	/
040	14,4	15,3	20,0	23,9	25,9	31,4	42,9	/	/
041	/	8,8	13,5	17,4	19,4	/	/	/	/
050	19,5	20,4	25,1	29,0	31,0	36,5	48,0	/	/
051	/	10,7	15,4	19,3	21,3	26,8	38,3	/	/
060	/	30,6	35,7	38,1	39,6	44,7	56,1	70,1	81,7
061	/	/	17,4	21,3	23,3	28,8	40,3	/	/
080	/	/	55,7	58,1	59,6	64,7	76,1	90,1	101,7
081	/	/	25,8	28,2	29,7	34,8	46,2	60,2	71,8
100	/	/	/	86,6	87,6	93,6	103,6	118,6	127,6
101	/	/	/	/	/	46,5	56,5	71,5	80,5
121	/	/	/	/	/	/	/	72,8	81,8
125	/	/	/	/	/	123,3	133,3	148,3	157,3

TB - Brake motor

CH	063	071	080	090S	090L	100	112	132S	132M
030	13,4	15,0	21,0	26,9	28,9	34,4	50,1	/	/
040	15,9	17,5	23,5	29,4	31,4	36,9	52,6	/	/
041	/	11,0	17,0	22,9	24,9	/	/	/	/
050	21,0	22,6	28,6	34,5	36,5	42,0	57,7	/	/
051	/	12,9	18,9	24,8	26,8	32,3	48,0	/	/
060	/	32,8	39,2	43,6	45,1	50,2	65,8	80,4	96,4
061	/	/	20,9	26,8	28,8	34,3	50,0	/	/
080	/	/	59,2	63,6	65,1	70,2	85,8	100,4	116,4
081	/	/	29,3	33,7	35,2	40,3	55,9	70,5	86,5
100	/	/	/	92,2	93,2	99,2	113,4	129,0	142,4
101	/	/	/	/	/	51,9	66,2	81,9	95,2
121	/	/	/	/	/	/	/	83,1	96,5
125	/	/	/	/	/	128,8	143,0	158,6	172,0

Kg w/o oil

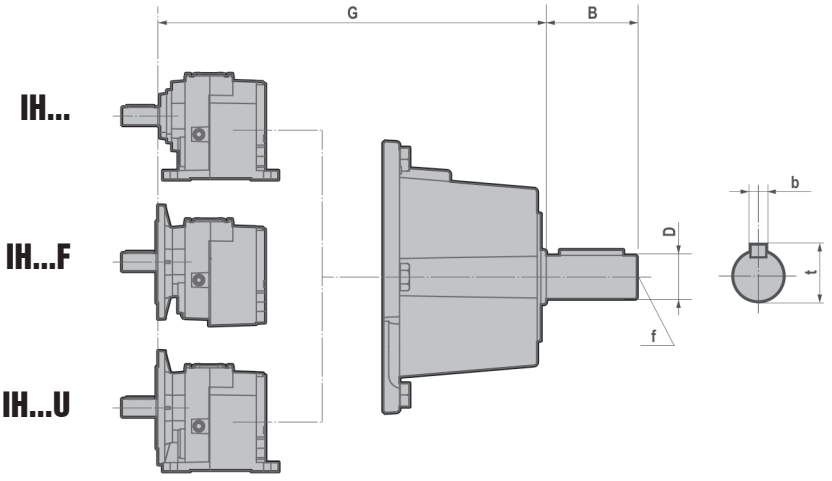
IH..1/2/3 - Dimensions



IH..1

IH	G	B	D	b	t	f
041	190	40	16 j6	5	18	M6
051	200	50	24 j6	8	27	M8
061	215	50	24 j6	8	27	M8
081	248	60	28 j6	8	31	M10
101	306.5	80	38 k6	10	41	M12
121	336.5	80	38 k6	10	41	M12

IH	~ Kg
041	7,5
051	9,4
061	11,4
081	23,2
101	40,3
121	41,6



IH..2/3

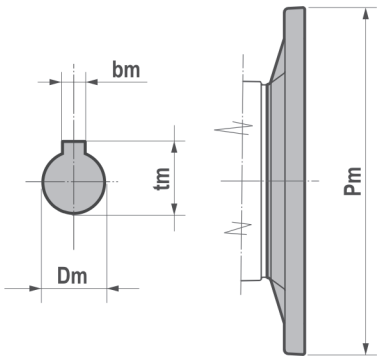
IH	G	G1	B	D	b	t	f
030	231	240	50	24 j6	8	27	M8
040	242	242	50	24 j6	8	27	M8
050	277	277	50	24 j6	8	27	M8
060	349	349	60	28 j6	8	31	M10
080	385.5	385.5	60	28 j6	8	31	M10
100	442.5	442.5	80	38 k6	10	41	M12
125	503	503	80	38 k6	10	41	M12
140	570	570	110	42 k6	12	45	M16

IH	~ Kg
030	11,5
040	14,0
050	19,1
060	33,1
080	53,1
100	87,5
125	117,1
140	192,1

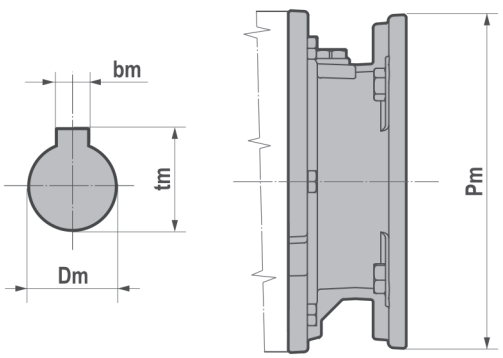
Kg w/o oil

PAM B5 - Dimensions

B5 B14



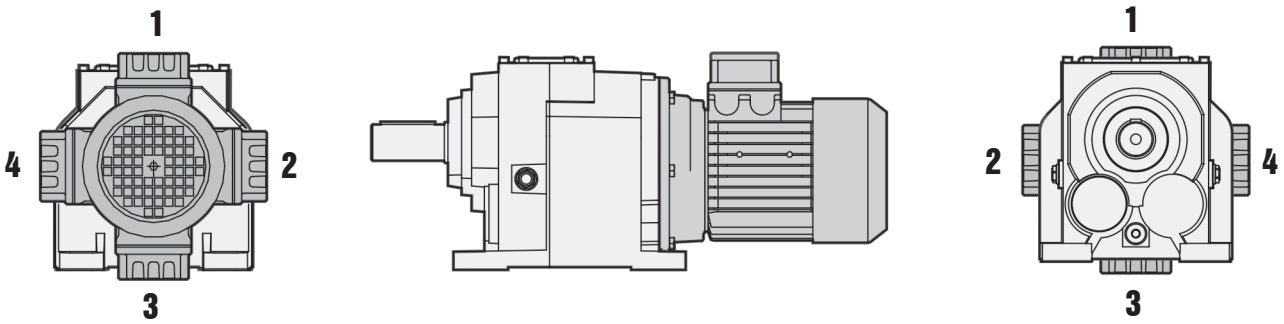
B5



B5	IEC											
	056	063	071	080	090	100	112	132	160	180	200	225
Pm	120	140	160	200	200	250	250	300	350	350	400	450
Dm	9	11	14	19	24	28	28	38	42	48	55	60
bm	3	4	5	6	8	8	8	10	12	14	16	18
tm	10,4	12,8	16,3	21,8	27,3	31,3	31,3	41,3	45,3	51,8	59,3	64,4

B14	IEC						
	056	063	071	080	090	100	112
Pm	80	90	105	120	140	160	160
Dm	9	11	14	19	24	28	28
bm	3	4	5	6	8	8	8
tm	10,4	12,8	16,3	21,8	27,3	31,3	31,3

Position of terminal box



- Unless otherwise specified, the gear reducer is supplied with terminal box in position 1.

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